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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,121	12/17/2001	Sergiy Victorovich Vasylyev		5045

25945 7590 04/07/2004

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EXAMINER

ROBINSON, MARK A

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/026,121

Applicant(s)

VASYLYEV ET AL.

Examiner

Mark A. Robinson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/29/04 has been entered.

***Specification***

2. The amendment filed 1/29/04 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the new paragraph 0048.1, and the amendment in paragraph 0049 concerning removably mounted reflective elements.

Applicant is required to cancel the new matter in the reply to this Office Action.

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***Claim Objections***

3. Claim 26 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 26 attempts to omit or replace structure found in the parent claim. However, this renders claim 26 improper. See MPEP 608.01(n) III.

4. Claim 23 is objected to because of the following informalities: "said photovoltaic cell" lacks antecedent basis. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 29 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in

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the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation of claim 29 directed to removably mounted reflective surfaces is not supported by the disclosure as originally filed and constitutes new matter.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 19-25,27,28,30-32 and 34-36 are rejected under 35 U.S.C. 102(b) as being anticipated by York 4347834.

York shows a collection apparatus including an array of spaced apart concave reflectors(12) with inclined ends and which are positioned to reflect radiation by means of a single reflection (see fig. 2) to elongated energy receiving means (note the discussion concerning use of a fluid-carrying tube or heat sink, or photovoltaic cell in the first two paragraphs of

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col. 6). York's device satisfies the claimed conditions for angles  $\alpha$  and  $\beta$  as can be seen in fig. 2. Note also that the reflectors are arranged so as to minimize screening and constitute sections of curve which satisfy the types set forth in claims 31, 32, 34 and 35. York shows an axle/tracking system in fig. 1.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 19-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popovich et al 4337759 in view of York.

Popovich shows a collection apparatus including an array of spaced apart reflectors(51) with inclined ends and which are positioned to reflect radiation by means of a single reflection (see fig. 4b) to elongated energy receiving means (15--note the discussion concerning use of a fluid-carrying pipe or heat sink in col. 5 lines 25-27, or a photovoltaic cell in col. 3 lines

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40-60). Popovich's device satisfies the claimed conditions for angles  $\alpha$  and  $\beta$  as can be seen in fig. 4b. Note also that the reflectors are arranged so as to minimize screening and constitute planar sections as set forth in claim 26. Popovich teaches an axle/tracking system in col. 3 lines 40-60.

Popovich does not teach the reflectors to have concave profiles. However, such surfaces are common in solar collection devices and an example is shown by York. Note that York also discloses the surfaces defined in claims 31, 32 and 34 as discussed above. It would have been obvious to the ordinarily skilled artisan at the time of invention to use concave surfaces in Popovich's device in order to increase the amount of radiation convergence upon the energy receiving means.

Regarding claim 29, although not taught by Popovich in view of York, removably mounted reflectors are well known in the art. It would have been obvious to the ordinarily skilled artisan at the time of invention to support the reflectors with such a mount in order to allow for adjustment and/or replacement of the individual reflectors.

Regarding claim 33, although not taught by the references, circular profiles (spherical reflector surfaces) are well known in the art. It would have been obvious at the time of invention to make the reflectors of Popovich in view of York with such a

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profile because spherical surfaces are easier to manufacture than are other types of curved surfaces (e.g. parabolic, elliptical, etc.).

11. Claims 26, 29 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over York.

Regarding claims 26 and 33, although not taught by the reference, planar or circular profiles (spherical surfaces) are well known in the art. It would have been obvious at the time of invention to make the reflectors of York with either a flat or circular profile because flat or spherical surfaces are easier to manufacture than are other types of curved surfaces (e.g. parabolic, elliptical, etc.).

Regarding claim 29, although not taught by York, removably mounted reflectors are well known in the art. It would have been obvious to the ordinarily skilled artisan at the time of invention to support the reflectors with such a mount in order to allow for adjustment and/or replacement of the individual reflectors.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tesch et al shows a collector including a plurality of inclined reflectors.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Robinson whose telephone number is (571) 272-2319.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn, can be reached at (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MR

3/31/04

  
MARK A. ROBINSON  
PRIMARY EXAMINER